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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/851,473 | 05/08/2001 | Paul A. Smith | 01CR052/KE | 3765 |

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EXAMINER

LY, ANH VU H

ART UNIT

PAPER NUMBER

2667

DATE MAILED: 11/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/851,473

Applicant(s)

SMITH ET AL.

Examiner

Anh-Vu H Ly

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>05/08/01</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Objections

1. Claim 8 is objected to because of the following informalities: in line 1, "The communication of claim 7" should be changed to - -The communication unit of claim 7- -. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Fornes, J. "Proposal for an ALM Open Architecture" 1999 Institute of Electrical Engineers, 29-30 March, 1999, pages 25/1-25/10.

With respect to claims 1, 7, and 13, Fornes discloses (see Abstract) automatic link maintenance (ALM) architecture for use in STANAG 5066 system (a STANAG 5066 communication system). ALM operation requires exchange of messages between two peer HF nodes (a first unit and a second unit). Fornes discloses on pages 25/3-25/4 a technique for determining the optimum transmission parameters values for peer nodes (wherein first unit and second unit communicate data at a data rate selected in response to the first LQA and second LQA value) by exchanging recommendations (LQAs) or list of parameters and their standard values (LQAs) between two peers ALM. Herein, the determination includes at least the initial stage (first unit provides an LQA command to the second unit), exchanged stages (second unit

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records a first LQA value in response to the LQA command and transmits the first LQA value to the first unit, wherein the first unit records a second LQA value in response to the first LQA value and transmits the second LQA value to the second unit), and acknowledged stage.

With respect to claims 2, 8 and 9, Fornes discloses on page 25/1 that the automatic link maintenance adapts the parameters values used by an HF transmission system (the system includes at least a transmitting entity and receiving entity) like transmit power, channel, waveform, interleave (communicate at a selected interleaving level), data rate, frame length, transmission duration, number of repetitions, etc... in order to get the optimum performances (wherein first unit and second unit communicate data at an interleaving level selected in response to first LQA value and second LQA value).

With respect to claims 3 and 16, Fornes discloses (see Abstract) automatic link maintenance (ALM) architecture for use in STANAG 5066 system. STANAG 5066 is a high frequency wireless system (wherein first and second communication units are wireless units).

With respect to claim 4, Fornes discloses (see Abstract) automatic link maintenance (ALM) architecture for use in STANAG 5066 system (wherein the first and second communication units communicate according to STANAG 5066).

With respect to claim 5, Fornes discloses on page 25/4 that the receiving node ALM will measure the channel characteristics of transmission (wherein LQA value indicates a quality of channel between the first unit and second unit).

With respect to claim 6, Fornes discloses on page 25/5 that the ALM uses the data exchanges between two HF nodes to exchange peer messages. ALM peer messages can either be inserted into user data flow in specific fields, such as EOW messages as it is in STANAG 5066 specification or use all link resources with a specific protocol such as Management messages as it is in STANAG 5066 specification (wherein LQA command includes a preamble, a first character, the first character being comprises of seven bits).

With respect to claims 10-12, Fornes discloses on pages 25/3-25/4 a technique for determining the optimum transmission parameters values for peer nodes by exchanging recommendations (LQAs) (wherein data rate is greater than 300 bits per second) or list of parameters and their standard values (LQAs) (the algorithm includes a maximum data rate, a default rate and a minimum data rate and uses the first LQA value to choose the data rate between the maximum data rate and minimum data rate) between two peers ALM. Herein, the determination includes at least the initial stage, exchanged stages (the transmitter provides a command LQA value), and acknowledged stage.

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With respect to claims 14 and 15, Fomes discloses on page 25/35 that the message includes S/N, BER, FER, MP, DS, etc...(wherein the quality command value signal and acknowledgement includes SINAD bits and BER bits).

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Gillespie, A.F.R. et al "Performance characteristics of the STANAG 5066 HF data link protocol" 1999 Institution of Electrical Engineers, 29-30 March 1999, pages 8/1-8/6.

Trinder, S.E. et al "Algorithms for the adaptation of data rate using STANAG 5066" 1999 Institution of Electrical Engineers, 29-30 March 1999, pages 9/1-9/6.

Trinder, S.E. et al "An Adaptation of STANAG 5066 for automatic power control on HF links" HF Radio Systems and Techniques, IEEE 2000, 10-13 July 2000, pages 151-154.

Young et al (US Patent No. 5,757,779) discloses automatic skywave communications system.

Li (US Patent No. 6,141,353) discloses subsequent frame variable data rate indication method for various variable data rate systems.


4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anh-Vu H Ly whose telephone number is 571-272-3175. The examiner can normally be reached on Monday-Friday 7:00am - 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on 571-272-3179. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

avl


CHI PHAM
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600 11/10/08